Effects of Team Dynamics on Higher-Order Thinking Skill in Business Simulation Games: The Mediating Roles of Team Knowledge Sharing

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Abstract:

Digital business simulation games (DBSGs) serve as dynamic educational tools designed to foster teamwork and skill acquisition. Although their instructional advantages are well established, the specific mechanisms that drive their success remain insufficiently examined. This research explores the influence of team interactions—particularly conflict-related factors (relationship conflict) and collaboration-oriented behaviors (cooperative orientation)—on higher-order thinking skills (HOTS), with knowledge sharing acting as an intermediary variable. Data were gathered from 192 undergraduate students engaged in a team-based DBSG course, and structural equation modeling (SEM) was employed to examine the associations. The findings reveal that a cooperative orientation facilitates knowledge exchange, which in turn significantly enhances problem-solving, critical thinking, and creativity. Conversely, relationship conflict inhibits knowledge sharing, thereby constraining the development of HOTS. Notably, cooperative orientation helps counteract the adverse effects of relationship conflict by fostering a supportive team environment that promotes collaboration and information exchange. These insights highlight the critical role of fostering constructive team interactions to maximize learning outcomes in DBSGs. Encouraging cooperation while minimizing conflict can strengthen cognitive skill development and enhance the effectiveness of interactive learning experiences. This study extends the body of knowledge on collaborative learning and provides valuable recommendations for educators and instructional designers aiming to refine learning strategies and optimize cognitive gains in digital business simulations.

Keywords:

Digital business simulation games, Interactive learning, Team dynamics, Knowledge sharing, Higher-order thinking skills.